

REMARKS

Applicants respectfully request the Examiner's reconsideration of the present application.

Claims 1-24 are pending in the present application.

Claims 7 and 23 are objected to because of informalities.

Claims 1-4, 6, 10-24 are rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Patent No. 6,968,466 ("Bolian").

Claims 5, and 7-8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bolian in view of U.S. Patent 7,082,488 ("Larson").

Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over Bolian in view of U.S. Publication No. 2002/0188718 ("McGraw").

Claim 7 has been amended.

Claims 7 and 23 are objected to because of informalities. Specifically, the Office Action mailed 8/18/2006 states that

2. Claim 7 is objected to because of the following informalities:
"a Intelligent" should have been "an Intelligent" at line 1.
Appropriate correction is required.
3. Claim 23 is objected to because of the following informalities: "Smart" should have been "System" at line 2.
Appropriate correction is required.

(8/18/2006 Office Action, p. 2)

Claim 7 has been amended to correct the typographical error.

Applicants submit that claim 23 was purposely drafted to read "Smart Management Bus (SMBus)" not "System Management Bus (SMBus)". Applicants refer the Examiner to paragraph [0025] in the specification.

Applicants submit that in view of the amendment to claim 7 and the explanation for claim 23, the objections to claims 7 and 23 have been overcome.

Claims 1-24 are rejected under 35 U.S.C. §102(e) and 35 U.S.C. §103(a) in view of Bolian, Larson, and McGraw. In particular, the Office Action mailed 8/18/2006 states

As per claim 1, Bolian discloses a method for communicating information from an operating system based blade server system environment, comprising:

transporting the information to a service processor [Fig. 2; col. 1, lines 38-57; col. 3, lines 18-34, 55-57; col. 4, lines 37-51; as shown in fig. 2, a server blade 1 comprises of a service processor (CPU 212); each server blade runs its own instance of operating system; the operating system on the server blade transmits the information of power on/off to the service processor]; and

transmitting the information from the service processor to a chassis management module via a dedicated channel [Fig. 2 and 3; col. 1, lines 38-57; col. 3, lines 18-34, 55-57; col. 4, lines 37-51; as shown in fig. 2 and 3, a server blade 1 comprising a service processor (CPU 212) and a server management control/blade 250 communicate with each other via a dedicated management bus 242; the server blade 1 can transmit the information from the service processor to the server management control/blade via the dedicated management bus 242].

(8/18/2006 Office Action, p. 3).

Bolian includes a disclosure of an apparatus for remotely controlling the power of an information handling system. The information handling system may be a server blade 210. The server blade 210 includes a power management system 220 that includes a power management controller 320. The power management controller 320 receives a power command signal from a management controller 250. The power management controller 320 generates a remote power signal (REMOTE_BTN_) under a variety of conditions (see Bolian col. 3, lines 55-57, col. 4, lines 4 to 59, and Figures 2 and 3).

Larson includes a disclosure of a system and method for detecting if a device is coupled to an inter-integrated circuit (I2C) router and/or for resetting the device. The I2C router comprises a first I2C bus port having a presence line and/or a reset line. The I2C router further comprises a control logic

coupled to and/or distributed within the first I2C bus port. The control logic may determine if a device is coupled to the I2C router as a function of a state of the presence line. The control logic may also determine if a reset condition exists. If a reset condition exists, the control logic changes the state of the reset line, thereby causing the device to reset itself (see Larson Abstract).

McGraw includes a disclosure of a system and method for storing console information includes a first computing device having a first console and a first console interface operable to transmit first console information associated with the first console. A second computing device is coupled for communication with the first computing device. The second computing device may include a memory module operable to receive the first console information. In a particular embodiment, the memory module may be operable to store the first console information (see McGraw Abstract).

Applicants submit that Bolian, Larson, and McGraw do not teach or suggest a method for communicating information from an operating system based blade server system environment that includes transmitting the information to a service processor, and transmitting the information from the service processor to a chassis management module via a dedicated channel.

The Office Action mailed 8/18/2006 states that "as shown in fig. 2, a server blade 1 comprises of a service processor (CPU 212); each server blade runs its own instance of operating system; the operating system on the server blade transmits the information of power on/off to the service processor" (8/18/2006 Office Action, p. 3).

Applicants respectfully submit that Bolian discloses something entirely different. Bolian discloses a power command signal that is generated from a management controller 250 and transmitted to the power management controller 320 in the power management system 220 (Bolian col. 2, lines 9-28 and Figures 2 and 3). The power command signal may be a shutdown command, emergency power off command, or a power on command (Bolian col. 4, lines 13-27). The power management controller 320 in the power management system 220 generates a remote power signal (REMOTE_BTN_) in response to the

power command signal under a variety of conditions (Bolian col. 4, lines 13-27 and Figure 3, 320). The remote power signal (REMOTE_BTN_) is ANDed by logic gate 340 with a BUTTON_ signal which reflects the condition of the VCC signal (which is high when power is on and low when power is low) (Bolian col. 4, lines 9-27 and Figure 3, 320, 330, 340, and 350). Applicants submit that the neither the power command signal, remote power signal (REMOTE_BTN_) nor the VCC indication signal (BUTTON_) is transmitted to the CPU 212 on the server blade 210.

The Office Action mailed 8/18/2006 states “as shown in fig. 2 and 3, a server blade 1 comprising of a service processor (CPU 212) and a server management controller/blade 250 communicate with each other via a dedicated management bus 242; the server blade 1 can transmit the information from the service processor to the server management controller/blade via the dedicated management bus 242” (8/18/2006 Office Action, p. 3).

Applicants respectfully disagree. Firstly, Bolian does not disclose the CPU 212 transmitting information to the management controller 250. On the contrary, the power command signal is transmitted from the management controller 250 (referred to by the 8/18/2006 Office Action as the chassis management module) to the power management controller 320. Applicants wish to particularly point out the direction of the arrow of DSMBus 260 on Figure 3 which indicates that direction of the data flow. Secondly, the “dedicated management bus 242”, referred to in the Office Action mailed 8/18/2006, is not a dedicated channel for transmitting information from a service processor to a chassis management module. Bus 242 is a network bus coupled to a plurality of server blades 210a-210d and is shared among the server blades 210a-210d (Figure 2a). Network bus 242 is also coupled to network switch blades 280 and shared with the network switch blades 280 (Bolian col. 3, lines 51-52).

Larson only discloses a system and method for presence detect and reset of a device coupled to an inter-integrated circuit router. Larson does not teach or suggest a method for communicating information from an operating system based blade server system environment that includes transmitting the

information to a service processor, and transmitting the information from the service processor to a chassis management module via a dedicated channel.

McGraw only discloses a console information storage system. McGraw does not teach or suggest a method for communicating information from an operating system based blade server system environment that includes transmitting the information to a service processor, and transmitting the information from the service processor to a chassis management module via a dedicated channel.

In contrast, claim 1 states

1. A method for communicating information from an operating system based blade server system environment, comprising:
transmitting the information to a service processor; and
transmitting the information from the service processor to a chassis management module via a dedicated channel.

(Claim 1) (Emphasis Added).

Given that claims 2-10 are dependent on claim 1, it is likewise submitted that claims 2-10 are patentable under 35 U.S.C. §102(e) and 35 U.S.C. §103(a) in view of Bolian, Larson, and McGraw.

Applicants also submit that Bolian, Larson, and McGraw also do not teach or suggest a method for managing information from an operating system based environment that includes determining whether the information is to be communicated to a chassis management module, and transmitting the information to a service processor upon determining that the information is to be communicated with the chassis management module.

The Office Action mailed 8/18/2006 states that “a server blade runs its own instance of operating system and the operating system determines whether the information is to be communicated to a management controller/blade via a dedicated management bus” (8/18/2006 Office Action, p. 4).

Applicants submit that Bolian does not teach or suggest communicating nor determining whether to communicate information to its management controller 250 from server blade 210. As stated above,

neither the power command signal, remote power signal (REMOTE_BTN_) nor the VCC indication signal (BUTTON_) is transmitted to the management controller 250 by the CPU 212 or by any other component on the server blade 210. With regards to column 3, lines 18 to 34, cited by the Office Action mailed 8/18/2006, when a server blade executing an operating system does not support remote shutdown capability, the server blade simply powers off (or powers on) when receiving the remote button signal (REMOTE_BTN_). The capabilities or information regarding the capabilities of the operating system are not transmitted off the server blade 210 or onto the management controller 250. No determination is made as to whether these capabilities of information regarding the capabilities are to be transmitted onto the management controller 250. The server blade 210 simply responds to the remote button signal accordingly (Bolian col 3, lines 31-34).

Furthermore, the Office Action mailed 8/18/2006 equates the “service processor” of the claimed invention to the CPU 212 on the server blade 210. The Office Action mailed 8/18/2006 appears to be implying that the operating system in the server blade 210 is making a determination as to whether information is communicated to a management controller 250, and that the operating system transmits the information to the CPU 212 upon determining that the information is to be communicated with the management controller 250. Applicants submit that the operating system for the server blade 210 is run on the CPU 212. Thus, the CPU 212 shown in Figure 2 of Bolian cannot be the “service processor” of the claimed invention. There is no transmitting of information to the CPU 212 upon determining that the information is to be communicated to the management controller 250.

In contrast, claim 11 states

11. A method for managing information from an operating system based environment, comprising:
determining whether the information is to be communicated to a chassis management module; and
transmitting the information to a service processor upon determining that the information is to be communicated with the chassis management module.

(Claim 11) (Emphasis Added).

Claims 16 and 21 include similar limitations. Given that claims 12-15, 17-20, and 22-24 are dependent on claims 11, 16, and 21, it is likewise submitted that claims 12-15, 17-20, and 22-24 are patentable under 35 U.S.C. §102(e) and 35 U.S.C. §103(a) in view of Bolian, Larson, and McGraw.

Applicants also submit that Bolian, Larson, and McGraw also do not teach or suggest transmitting information to a chassis management module or determining whether information is to be communicated to a chassis management module, where the information is an Advance configuration Power Interface (ACPI) sleep state.

With reference to claim 1, the Office Action mailed 8/18/2006 equates “the information” in the claimed invention to “the information of power on/off”. Applicants submit that neither the power command signal, remote power signal (REMOTE_BTN_), nor the VCC indication signal (BUTTON_) is related to ACPI sleep states. Exemplary embodiments of ACPI sleep states are described in paragraph [0004] of the specification.

Commonly supported S-states include the S0, S1, S4, and S5 sleep states. The S0 sleep state is a state where all the devices on the computer system are on and no sleep is enabled. The S1 sleep state is a low wake-up latency sleep state. In the S1 sleep state, the computer system context in the processor and/or chip set is maintained. The S4 sleep state (non-volatile sleep state) is a special global system state that allows system context to be saved and restored relatively slowly when power is lost to the baseboard. The operating system writes system context to a non-volatile storage file and leaves appropriate context markers. The S5 sleep state is similar to the S4 sleep state except the operating system does not save any context nor enable any devices to wake up the system. The system is in the “soft” off state and requires a complete boot when awakened.

(Paragraph [0040] Specification).

The Office Action mailed 8/18/2006 also states that “the power management system of the server blade is compliant with ACPI” (8/18/2006 Office Action, p. 7).

Applicants submit that although the power management system 220 may be compliant with ACPI, the ACPI functionalities utilized by the power management system 220 are applied only to the server blade 210 corresponding to the power management system 220 and are not sleep states that are transmitted off the server blade 220 to a server management blade 250. For example, Bolian states that the “ACPI functionality includes remote power on/off, remote hard shutdown and remote hard shutdown/reboot. The behavior of the power management system 220 when receiving the remote button signal depends upon the operating system executing on the server blade 210” (Bolian col. 3, lines 24-31). The power management system 220 clearly does not transmit information to a chassis management module or determine whether information is to be communicated to a chassis management module, where the information is an Advance configuration Power Interface (ACPI) sleep state.

Larson only discloses a system and method for presence detect and reset of a device coupled to an inter-integrated circuit router. Larson does not teach or suggest transmitting information to a chassis management module or determining whether information is to be communicated to a chassis management module, where the information is a ACPI sleep state.

McGraw only discloses a console information storage system. McGraw does not teach or suggest transmitting information to a chassis management module or determining whether information is to be communicated to a chassis management module, where the information is a ACPI sleep state.

In contrast, claim 10 states

10. The method of Claim 1, wherein the information is an Advance Configuration Power Interface (ACPI) sleep state.

(Claim 10) (Emphasis Added).

Claims 15 and 20 and 22 include similar limitations.

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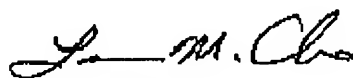
Title: METHOD AND APPARATUS FOR POWER MANAGEMENT OF SERVER BLADES IN AN OPERATING SYSTEM BOOTED ENVIRONMENT

In view of the amendments and arguments set forth herein, it is respectfully submitted that the applicable rejections and have been overcome. Accordingly, it is respectfully submitted that claims 1-24 should be found to be in condition for allowance. The Examiner is invited to telephone Applicants' attorney (217-377-2500) to facilitate prosecution of this application.

If any additional fee is required, please charge Deposit Account No. 50-1624.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 4th day of December, 2006.



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